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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FRANCIS, MARK P

ART UNIT PAPER NUMBER

2193

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/912,173

Applicant(s)

GOTWALS ET AL.

Examiner

Mark P. Francis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/07/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed on July 23, 2001.
2. Claims 1-47 have been examined.

Priority Date

3. The priority date considered for this application is July 23, 2001.

Oath/Declaration

4. The Office acknowledges receipt of a properly signed oath/declaration filed July 23, 2001.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 1 and 17,

Statutory subject matter requires two things:

- (1) it must be in the "useful arts," U.S. Const., art. I, 8, cl.8,

In this instance, the language of the claims raises a question as to whether the claims are directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a useful, concrete, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101; and if it is,

(2) it must not fall within one of the exceptions for "laws of nature, physical phenomena and abstract ideas."

Under the most recent Federal Circuit cases, transformation of data by a machine (e.g., computer) is statutory subject matter provided the claims recite a "practical application, which produce[s] a useful, concrete and tangible result." State St. Bank & Trust Co. v. Signature Fin. Group, Inc. 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1600-01 (Fed. Cir. 1998).

The Office's interpretation of claims 1 and 17 are that it does not expressly or implicitly require performance of any of the steps by a machine such as general-purpose digital computer. In claims 1 and 17, Applicant defines a method that consists merely of software implemented means, i.e. computer programs per se. Applicant thus fails to disclose that these software implemented means are tangibly embodied in and executed by a piece of hardware and that their functions have practical applications which produce useful, concrete and tangible results under the State Street Formulation. Structure will not be read into the claims for the purpose of the statutory subject matter analysis even though the steps might be capable of being performed by a machine.

The rejection of the base claim is incorporated into their dependent claims

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

8. A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaler.
(6,467,052)

Independent claims

With respect to claims 1,15, and 33, Kaler discloses A machine-readable storage medium tangibly embodying a sequence of instructions executable by the machine to perform a method(e.g. See Fig. 1, and related text), the method comprising:

obtaining performance data about a system using a first tool; (Col 3, lines 50-67, "...analyzing the performance...", Col 12, lines 29-67, "Data collection begins in the IECs...")

sorting the performance data by a number of contexts, each context divided into a number of sub-contexts; (e.g. See Figs. 8, 9, and 10, and related text, Col 23 and 24, lines 1-67, "...Filter reduction...")

automatic prioritizing the performance data for at least one sub-context using a pre-determined criteria; (Col 14, lines 8-50, "...user-specified filtering...", Col 40, lines 63-67,

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"...analyzing the performance...", Col 41, lines 1-30, "...selection criteria...", Col 34, lines 29-54, "...pre-determined heuristics...")

obtaining an insight for at least one sub-context based on the prioritized performance data using a second tool; (Col 36, lines 6-36, "...provide additional insight...")

and obtaining an advice associated with that insight using the second tool. (Col 36, lines 6-36, "...provide additional insight...", e.g. See Fig. 15,16,17, and 18, and related text)

With respect to claims 17 and 31, Kaler discloses A machine-readable storage medium tangibly embodying a sequence of instructions executable by the machine to perform a method, the method comprising:

obtaining performance data about a first system and a second system using a first tool; (Col 3, lines 45-67, "...and a wide spectrum of data processing systems...", Col 3, lines 50-67, "...analyzing the performance...", Col 12, lines 29-67, "Data collection begins in the IECs..." e.g. See Figs. 24A and 24B, and related text)

sorting the performance data for both systems by a number of contexts, each context divided into a number of sub-contexts; (e.g. See Figs. 8, 9, and 10, and related text, Col 23 and 24, lines 1-67, "...Filter reduction...")

automatic prioritizing the performance data for at least one sub-context using a predetermined criteria; (Col 14, lines 8-50, "...user-specified filtering...", Col 40, lines 63-

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67, "...analyzing the performance...", Col 41, lines 1-30, "...selection criteria...", Col 34, lines 29-54, "...pre-determined heuristics...")

comparing the first system and the second system by comparing the prioritized performance data; (Col 11, lines 1-45, "...a globally distributed system...", e.g. See fig. 2 and related text, Col 3, lines 45-67, "...data processing systems...", e.g. See Figs. 24A and 24B)

obtaining an insight for a sub-context of one system by using the comparison between the first and second systems using a second tool; (Col 36, lines 6-36, "...provide additional insight...")

and obtaining an advice(heuristics) associated with that insight using the second tool. (Col 36, lines 6-36, "...provide additional insight...", e.g. See Fig. 15,16,17, 18, 27A, elements 712 and 713,718, "...heuristics..." and related text)

Dependent claims

With respect to claims 2 and 18, the rejection of claims 1 and 17 are incorporated respectively and further, Kaler discloses inputting the pre-determined criteria using a user interface. (e.g. See Figs. 25A, 25B and related text)

With respect to claim 3, the rejection of claim 1 is incorporated and further, Kaler

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discloses comprising displaying the insight and the advice on a display. (Col 36, lines 6-36, "...provide additional insight...", e.g. See Figs. 26C, 27A, 27B, and related text)

With respect to claim 4, the rejection of claim 1 is incorporated and further, Kaler discloses wherein obtaining performance data about a system using a first tool comprises:

collecting data on a number of programs run on a system during a sampling period based on performance counters; (Col 3, lines 50-67, "...analyzing the performance...", Col 12, lines 29-67, "Data collection begins in the IECs...")

and transferring the data to a file. (Col 3, lines 50-67, "...analyzing the performance...", Col 12, lines 29-67, "Data collection begins in the IECs...", Col 14, lines 8-28, "...Once written to...")

With respect to claims 5 and 21, the rejection of claims 4 and 20 are incorporated respectively and further, Kaler discloses wherein the performance data includes central processing unit (CPU) event measurements. (Col 11, lines 48-67, "...Events created...", Col 12, lines 1-67, "...events generated by the IEC's...")

With respect to claims 6 and 38, the rejection of claims 5 and 33 are incorporated respectively and further, Kaler discloses wherein the system is a processor. (Col 8, lines 49-67, "...the processor...", Col 26, lines 38-49, "...the processors...")

With respect to claims 7 and 23, the rejection of claims 4 and 20 are incorporated respectively and further, Kaler discloses wherein one performance counter is clockticks.(Col 13, lines 46-67, "...establish clock skews...")

With respect to claims 8 and 24, the rejection of claims 4 and 20 are incorporated respectively and further, Kaler discloses wherein one performance counter is retired instructions.(Col 3, lines 19-42, "...system counters...")

With respect to claims 9,25,and 39, the rejection of claims 5 and 33 are incorporated respectively and further, Kaler discloses wherein sorting the data by a number of contexts includes sorting performance data measurements for number of processes for each program, the program being the context and the processes being the sub-contexts. (e.g. See Figs. 8, 9,and 10, and related text, Col 23 and 24, lines 1-67, "...Filter reduction...")

With respect to claims 10 and 26, the rejection of claims 1 and 17 are incorporated respectively and further, Kaler discloses wherein sorting the data by a number of contexts includes sorting performance data measurements for a number of modules for each program, the program being the context and the modules being the sub-contexts. (e.g. See Figs. 8, 9,and 10, and related text, Col 23 and 24, lines 1-67, "...Filter reduction...")

With respect to claims 11 and 41, the rejection of claims 1 and 33 are incorporated respectively and further, Kaler discloses wherein sorting the data by a number of contexts includes sorting data measurements corresponding to a number of bins of each program each bin containing a number of lines of the program the program being the context and the bins being sub-contexts. (Col 23, lines 14-58, "...user filter...")

With respect to claims 12 and 42, the rejection of claims 1 and 33 are incorporated respectively and further, Kaler discloses wherein the pre-determined criteria is the longest running time. (Col 13, lines 51-67, "...time-driven data...", Col 14, lines 1-28, "...measure varying data...")

With respect to claims 13,16, and 43, the rejection of claims 1,15, and 33 are incorporated respectively and further, Kaler discloses wherein the pre-determined criteria is the greatest number of clockticks. (Col 13, lines 46-67, "...establish clock skews...", Col 14, lines 1-28, "...measure varying data")

With respect to claims 14 and 44, the rejection of claims 1 and 33 are incorporated respectively and further, Kaler discloses wherein the pre-determined criteria is the greatest number of retired instructions. (Col 13, lines 51-67, "...time-driven data...", Col 14, lines 1-28, "...measure varying data...")

With respect to claims 19 and 37, the rejection of claims 17 and 33 are incorporated respectively and further, Kaler discloses displaying the prioritized performance data, the insight, and the advice on a display. (Col 36, lines 6-36, "...provide additional insight...", e.g. See Fig. 15,16,17, 18, 27A, elements 712 and 713,718, "...heuristics..." and related text, e.g. See Fig. 26B and related text)

With respect to claim 20, the rejection of claim 17 is incorporated and further, Kaler discloses wherein obtaining performance data for a first system and a second system using a tool comprises: collecting data on a number of programs run on a system during a sampling period based on performance counters; (Col 3, lines 50-67, "...analyzing the performance...", Col 12, lines 29-67, "Data collection begins in the IECs...")

and transferring the data to a file. (Col 3, lines 50-67, "...analyzing the performance...", Col 12, lines 29-67, "Data collection begins in the IECs...")

With respect to claim 22, the rejection of claim 20 is incorporated and further, Kaler discloses wherein the first and second systems are processors. (Col 8, lines 49-67, "...the processor...")

With respect to claim 27, the rejection of claim 17 is incorporated and further, Kaler discloses wherein sorting the data by a number of contexts includes sorting performance data measurements for a number of bins for each program, each bin containing a number of instruction of the program, the program being the context and the bins being the sub-contexts. (Col 23, lines 14-58, "...user filter...")

With respect to claims 28,32, and 45, the rejection of claims 17, 31, and 35 are incorporated respectively and further, Kaler discloses wherein the pre-determined criteria is an equation, the equation being $T_{sub.1} - T_{sub.2}$ where $T_{sub.1}$ represents a running time of at least one of a context and a sub-context on the first system, and $T_{sub.2}$ represents a running time of at least one of the context and the sub-context on the second system. (Col 13, lines 51-67, "...time-driven data...", Col 14, lines 1-28, "...measure varying data...")

With respect to claims 29 and 46, the rejection of claims 17 and 35 are incorporated respectively and further, Kaler discloses wherein the pre-determined criteria is an equation, the equation being $C_{sub.T1} - C_{sub.T2}$ where $C_{sub.T1}$ represents the clockticks for at least one of a context and a sub-context on the first system and $C_{sub.T2}$ represents the clockticks for at least one of the context and the sub-context on the second system. (Col 13, lines 46-67, "...establish clock skews...", Col 14, lines 1-28, "...measure varying data...")

With respect to claims 30 and 47, the rejection of claims 17 and 35 are incorporated respectively and further, Kaler discloses wherein the pre-determined criteria is an equation, the equation being $0.8 \times C_{sub.T1} C_{sub.T2}$ where $C_{sub.T1}$ represents the clockticks for at least one of a context and a sub-context on the first system, and $C_{sub.T2}$ represents the clockticks for at least one of the context and the sub-context on the second system (Col 13, lines 46-67, "...clock skews...time-driven data...", Col 14, lines 1-28, "...measure varying data...")

With respect to claim 34, the rejection of claim 33 is incorporated and further, Kaler discloses wherein the second tool comprises:

an insight module to determine the insight for the sub-context based on the prioritized performance data; (Col 36, lines 6-36, "...provide additional insight...", e.g. See Fig. 15,16,17, and 18, and related text, Col 9, lines 5-50, "...program modules...", Col 27, lines 5-39, "...with various modules...")

and an advice module to determine the advice associated with that insight. (Col 36, lines 6-36, "...provide additional insight...", e.g. See Fig. 15,16,17, and 18, and related text, Col 9, lines 5-50, "...program modules...", Col 27, lines 5-39, "...with various modules...")

With respect to claim 35, the rejection of claim 33 is incorporated and further, Kaler

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discloses comprising a comparator to compare a first system and a second system by comparing prioritized performance data of both systems. (Col 11, lines 1-45, "...a globally distributed system...", e.g. See fig. 2 and related text, Col 3, lines 45-67, "...data processing systems...", e.g. See Figs. 24A and 24B)

With respect to claim 36, the rejection of claim 33 is incorporated and further, Kaler discloses comprising a user interface to allow a user to input the pre-determined criteria. (e.g. See Figs. 25A, 25B and related text)

With respect to claim 40, the rejection of claim 33 is incorporated and further, Kaler discloses wherein the sorted performance data includes performance data for a number of modules in each program the program being the context and the processes being the sub-contexts. (e.g. See Figs. 8, 9, and 10, and related text, Col 23 and 24, lines 1-67, "...Filter reduction...")

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark P. Francis whose telephone number is (571) 272-7956. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kakali Chaki

Mark P. Francis
Patent Examiner
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